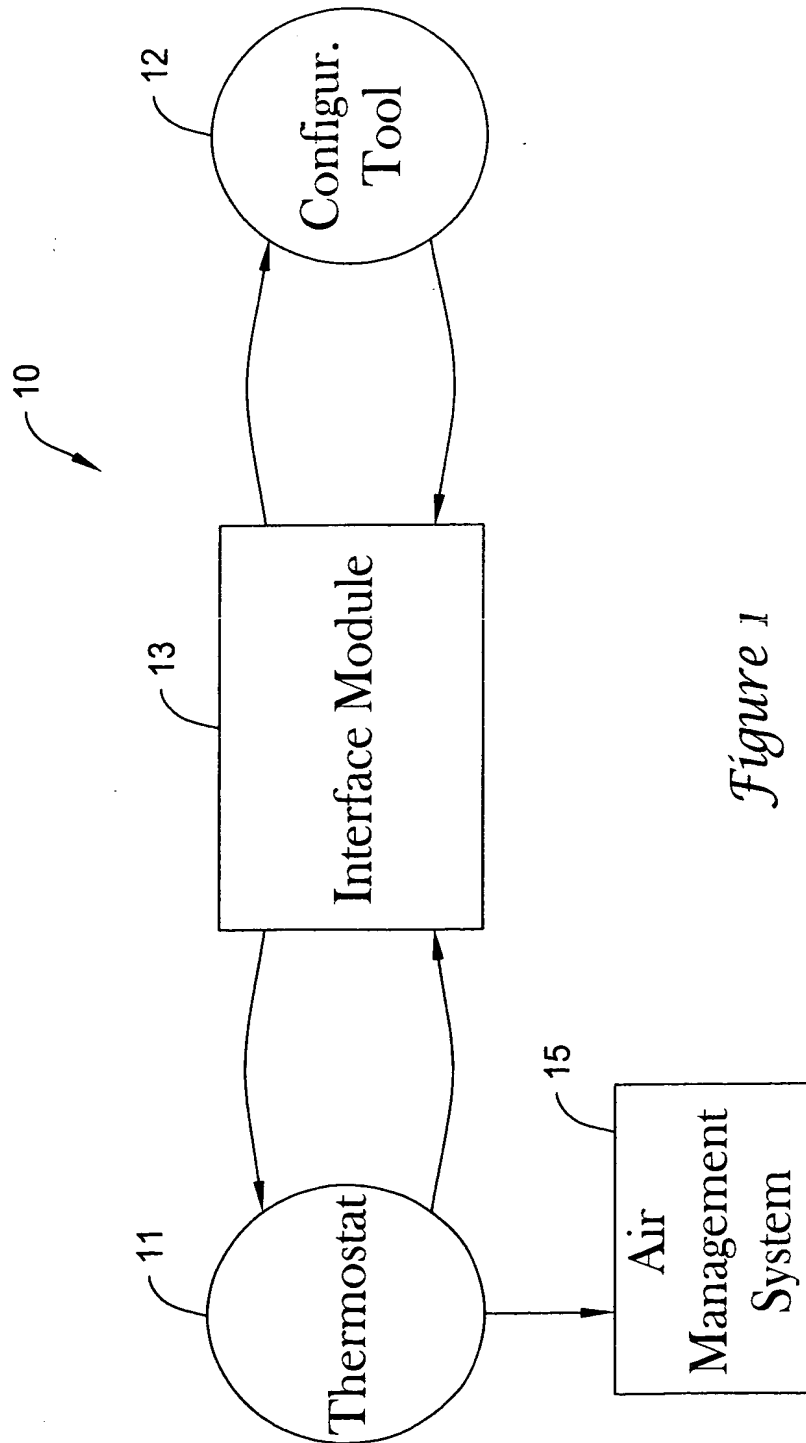


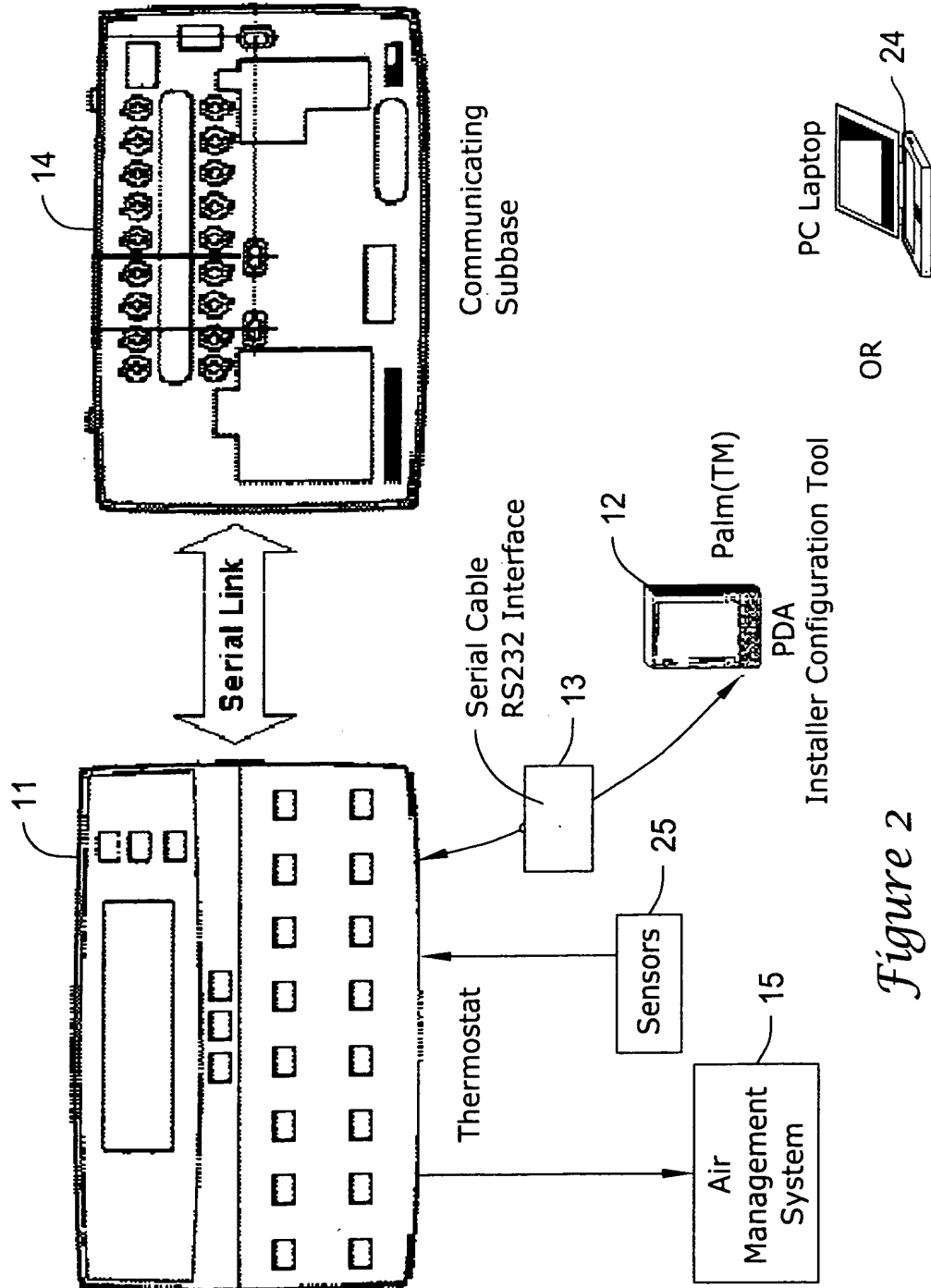


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*Figure 1*

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3/33

T7350 Configuration Tool  
Version: 0.0.d.18d

Override Monitor Data  
Set Clock Holidays  
Temp SetPts Wldy Schedule  
Upload Config  
New Config

▼ Select Existing Config

Figure 3A

Summary ▼ Select Setup

Config Name: New Config

Description: 120 character description which is user entered

Model: ▼ Mod1\_Basic

Control: Standard Heat Pmp

Cnfg ID: 00

DownLd Back Next Save SaveAs

Figure 3B

T7350  
Configuration Tool  
Version: 0.0.d.5

Temp SetPts Holidays  
Set Clock Wldy Schedule  
Monitor Data Upload Config  
New Config

▼ Select Existing Config

Figure 4A

T7350  
Configuration Tool

DEFAULT  
Example1  
Example2  
Example3  
Example4  
New Config

Holidays  
Schedule  
d Config

Figure 4B

Summary

Config Name: Example2

Description: T7350B model supports 6 relays, remote space sensor, DAT, OAT

Model: ▼ T7350B (6DigOut)

Control: Standard Heat Pmp

Cnfg ID: 22

DownLd Back Next Save SaveAs

Figure 4C

Summary

Config Name: Example2

Description: T7350B model supports 6 relays, remote space sensor, DAT, OAT

Connecting to T7350

Please connect PDA serial port to the T7350 using serial cable.

OK Cancel

Figure 4D

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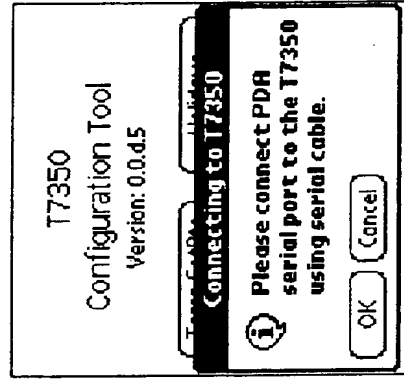


Figure 5A

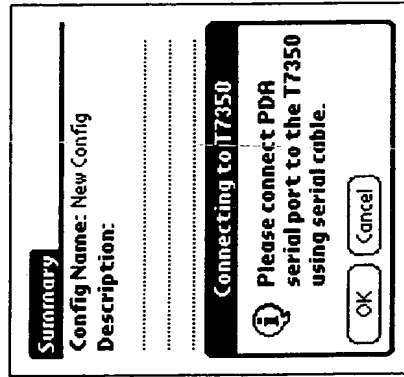


Figure 5B

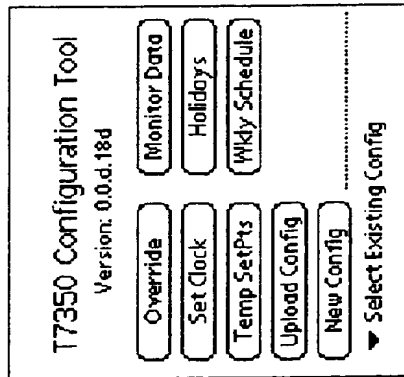


Figure 5C

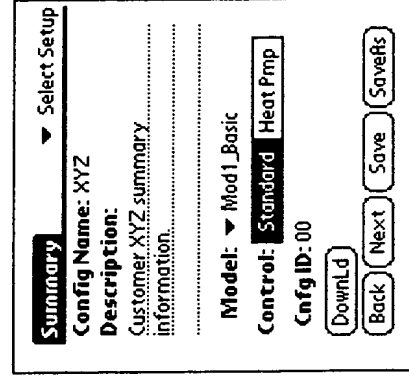


Figure 6A

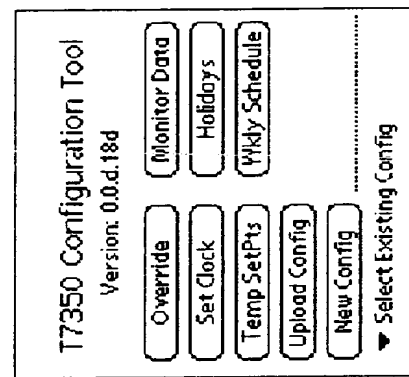


Figure 6B

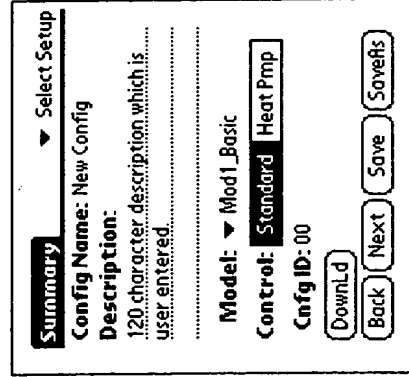


Figure 6C

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**Summary**  
**Config Name:** XYZ  
**Description:**  
 A short description of customer XYZ configuration.  
**Connecting to T7350**  
 Please connect PDA serial port to the T7350 using serial cable.  
 OK Cancel

Figure 6D

**Room Temp Calibrate**  
**Actual Value:** 68.4 F  
**Edit Value:** 68.4 F  
**Offset:** -3 F  
 Calibrate Refresh Close

Figure 7B

**File Connect Setup Help**  
**Connect:** Download Upload Monitor Set Clock Calibrate  
**Setup:** Override Set Clock Temp SetPts Upload Config New Config  
**Help:** Select Existing Config  
**Model:**  
**Control:**  
 Down Load Next Save As Save

Figure 7A

**T7350 Configuration Tool**  
 Version: 0.0.d.18d  
 Monitor Data Holidays Weekly Schedule  
 Override Set Clock Temp SetPts Upload Config New Config  
 Select Existing Config

Figure 8A

**T7350 Configuration Tool**  
 Version: 0.0.d.5  
**Connecting to T7350**  
 Please connect PDA serial port to the T7350 using serial cable.  
 OK Cancel

Figure 8B

**Summary**  
**Config Name:** U04/09/03 11:05  
**Description:**  
 Upload: 04/09/2003, 11:05 am  
 Firmw: 0.0.14; ComV: 1002  
 RefPrgr: 1; SubBaseID: 3  
**Model:** T7350D,3H3C,RH  
**Control:** Standard Heat Pmp  
 Back Next Save SaveAs Download

Figure 8C

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**T7350 Configuration Tool**  
 Version: 0.0.d.18d

Override	Monitor Data
Set Clock	Holidays
Temp SetPts	Wkly Schedule
Upload Config	
New Config	
▼ Select Existing Config	

Figure 8D

**Monitor Data**

SubBaseID: T7350D.3H3C.RH  
 FirmwareVersion: 0.0.19

Room Temperature: 79.2 F  
 EffectiveSetPoint: 75.0 F

RoomRH: 31 %  
 Dehumidification: Off

DischargeAirTemp: 70.3 F

[Update] [Close]

Figure 8E

**Summary**

Config Name: Example3

Description:  
 T7350C SmartStat supports 6  
 Relays, remote space sensor, DAT,  
 OAT, RH, Occ sensor

Model: ▼ T7350C (6DigOut+RH)

Control: Standard Heat Pmp

Cnfg ID: 23

[DownLd] [Back] [Next] [Save] [SaveAs]

Figure 9A

**Inputs**

Room Temp: Local Remote  
 Rmt+StPt

Room Rel Humidity: Local Remote  
 None

Occ Sensor: None Remote

Discharge Air Temp: None Remote

Outdoor Air Temp: None Remote

[Back] [Next]

Figure 9B

**Outputs**

RuxDO:

Time of Day
Economizer
Dehumid Hot Gas BP
Simple Dehumid

[Back] [Next]

Figure 9C

**Cooling Config**

Stages: 0 1 2 3

Cooling: Std 3 cph Fast 4 cph

Response:

☒ Enable OAT Lockout  
 OAT SetPt 35 F

☒ Enable DAT Low Limit  
 DAT SetPt 45 F

[Back] [Next]

Figure 9D

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**SetPoints**

	Heating	Cooling
Occupied	70	75 F
Standby	67	78 F
UnOcc	55	85 F
Occupied SetPt Stops	55	85 F

TempOverride: 3 Hrs

Back Next Download

Figure 9I

**Summary**

**Config Name:** ExampleModelID

**Description:**  
 T7350D model supports: 6 Relays,  
 remote space sensor, DAT, OAT,  
 RH, Occ sensor

**Model:** T7350D,3H3C,RH

**Control:** Standard Heat Pmp

ConfigID

Back Next Save Savefs Download

Figure 9J

**Weekly Schedule**

Select New Schedule

Savefs Delete Modify

MON	08:00 am OCC	
	10:00 pm UNOCC	
TUE	08:00 am OCC	
	10:00 pm UNOCC	
WED	08:00 am OCC	
	10:00 pm UNOCC	
THU	08:00 am OCC	

Back Next Download

Figure 9G

**Modify Schedule**

Day: Monday

Event# -- Mode -- Time --

1	Occupied	08:00 am
2	Unoccupied	10:00 pm
3	None	12:00 am
4	None	12:00 am

CopyDayTo Sun Sat Hol

M T W T F

OK

Figure 9H

**Heating Config**

Stages: 0 1 2 3

**Heating:** Std 3cph Med 6cph

**Response:** Fast 9cph Fast 20cph

☒ Enable OAT Lockout

OAT SetPt 70 F

☒ Enable DAT High Limit

DAT SetPt 110 F

Back Next

Figure 9E

**Fan**

**FanSwitch:** On Auto

**FanOperation:** Conventional Electric Heat

**Heat:** No Extended Op Extend 90 sec

**Cool:** No Extended Op Extend 90 sec

Back Next

Figure 9F





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**Modify Holiday**

▼ New Years Day  
 New Years Day

Start Month: ▼ Jan

Start Day: 1

Duration: 1 Day

Spin Speed 1X 10X

OK

Figure 10K

**Modify Holiday**

▼ New Years Day  
 Memorial Day  
 Independence Day  
 Labor Day  
 Thanksgiving  
 Christmas  
 Hol 7  
 Hol 8  
 Hol 9  
 Hol 10

Spin Speed 1X 10X

OK

Figure 10L

**Day Light Saving**

Start Month: ▼ Apr

Start Day: FirstSun

Stop Month: ▼ Oct

Stop Day: LastSun

Spin Speed 1X 10X

OK

Figure 10I

**Holiday**

▼ Select New Holiday Group

SaveAs Delete Modify

New Years Day  
 Jan 1, Dur:1  
 Memorial Day  
 May LastMon, Dur:1  
 Independence Day  
 Jul 4, Dur:1  
 Labor Day

Spin Speed 1X 10X

OK DownLoad

Figure 10J

**Loop Tuning**

Heating Cooling

TR 7 7 F

IT 1650 1650 sec

DT 0 0 sec

Anticipator Authority: 4 F

Apply To Htg Htg&Clg

Spin Speed 1X 10X 100X

OK

Figure 10G

**Recovery**

Cool Heat

ORT@Min: 90 0 F

Ramp Min: 3 5 F/hr

ORT@Max: 70 40 F

Ramp Max: 6 8 F/hr

LeadTime -Cool- -Heat-

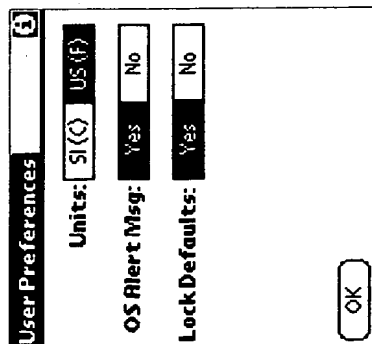
MaxRange 1.8 to 3.5 2.0 to 3.1 hr

Spin Speed 1X 10X 100X

OK LeadTimeInfo

Figure 10H

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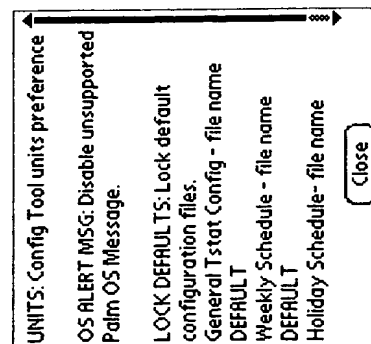
**User Preferences**

Units:

OS Alert Msg:

Lock Defaults:

Figure 11A



UNITS: Config Tool units preference

OS ALERT MSG: Disable unsupported  
Palm OS Message.

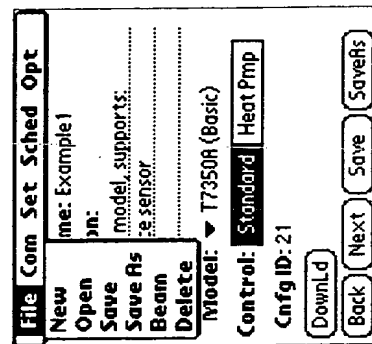
LOCK DEFAULTS: Lock default  
configuration files.

General Tstat Config - file name  
DEFAULT

Weekly Schedule - file name  
DEFAULT

Holiday Schedule- file name

Figure 11B



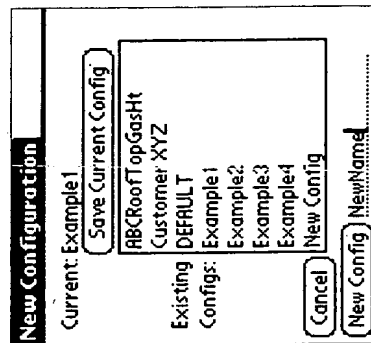
**File Com Set Sched Opt**

New  
Open  
Save  
Save As  
Beam  
Delete

me: Example1  
pn:  
model, supports:  
e sensor

Model: ▼ T7350A (Basic)  
Control:    
Cnfg ID: 21

Figure 12A

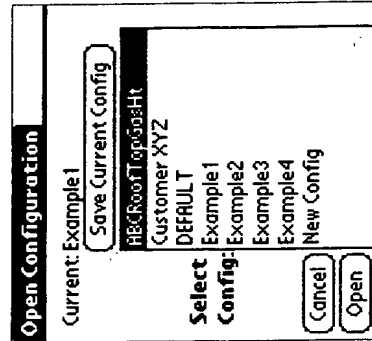


**New Configuration**

Current: Example1  
Save Current Config

Existing Configs:  
ABCRootTopGasHt  
Customer XYZ  
DEFAULT  
Example1  
Example2  
Example3  
Example4  
New Config

Figure 12B

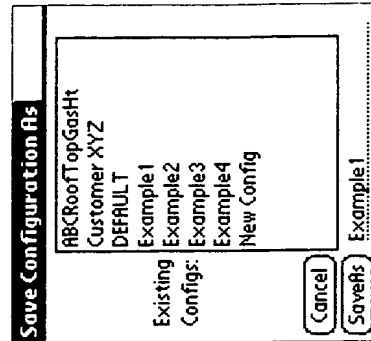


**Open Configuration**

Current: Example1  
Save Current Config

Select Config:  
ABCRootTopGasHt  
Customer XYZ  
DEFAULT  
Example1  
Example2  
Example3  
Example4  
New Config

Figure 12C



**Save Configuration As**

Existing Configs:  
ABCRootTopGasHt  
Customer XYZ  
DEFAULT  
Example1  
Example2  
Example3  
Example4  
New Config

Figure 12D

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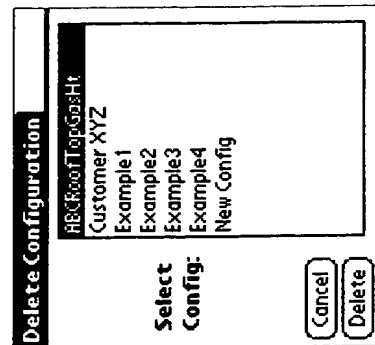


Figure 12E

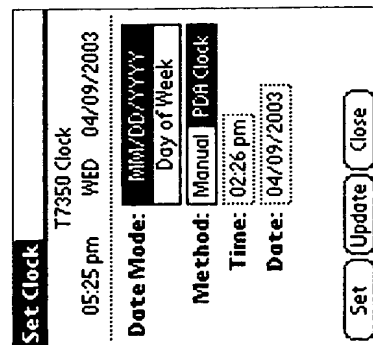


Figure 13

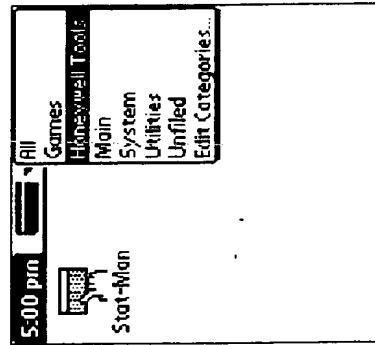


Figure 14A

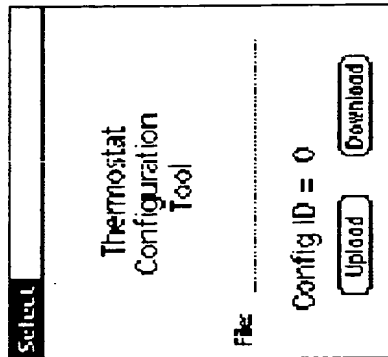


Figure 14B

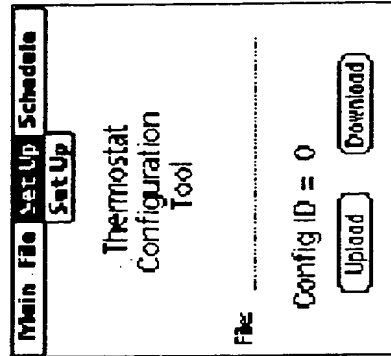


Figure 14C

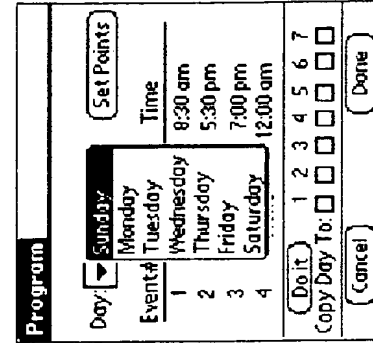


Figure 14D

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**Installer Set Up**

Temperature Units  
☐ Deg F ☐ Deg C

Clock Format  
☐ 12 Hr ☐ 24 Hr

Fan Behavior  
☐ Continuous ☒ Intermittent

Program from Keyboard  
☐ Yes ☒ No

Figure 14I

**Set Up 2**

Heat Stages

Cool Stages

Energize Fan For  
☐ Cool Only ☒ Heat & Cool

Sensor Location  
☐ Local ☐ Remote

Figure 14J

**Program**

Day: ☐ Sunday

Event#	Mode	Time
1	Occupied	8:30 am
2	Unocc	5:30 pm

Select Event Time  
 :  :  ☐ AM ☒ PM

Figure 14G

**Set Points**

	Cooling	Heating
Occupied	72	70
Standby	75	68
Unoccupied	80	60

Figure 14H

**Program**

Day: ☐ Sunday

Event#	Mode	Time
1	Occupied	8:30 am
2	Unocc	5:30 pm
3	Standby	7:00 pm
4	None	12:00 am

Figure 14F

**Program**

Day: ☐ Sunday

Event#	Mode	Time
1	None	3:30 am
2	Occupied	5:30 pm
3	Standby	2:00 am
4	Unocc	2:00 am

Figure 14F

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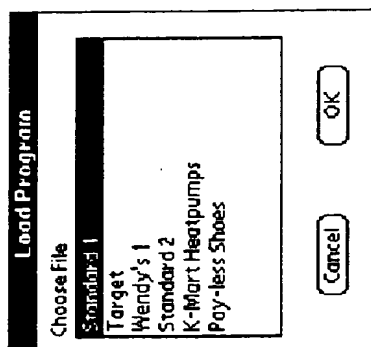


Figure 14K

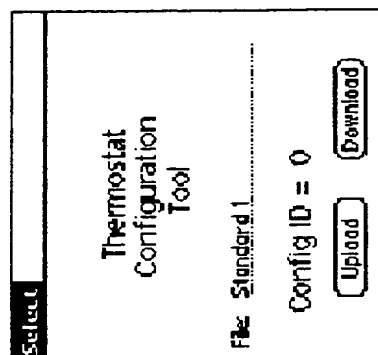


Figure 14L

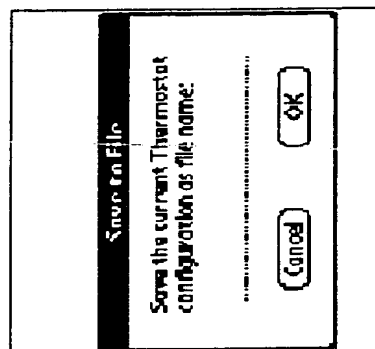


Figure 14M

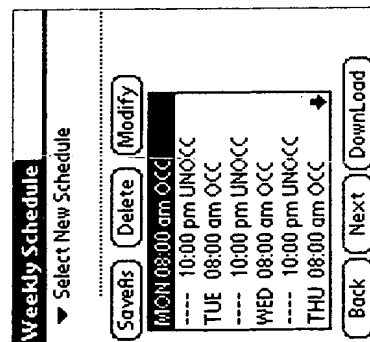


Figure 14N

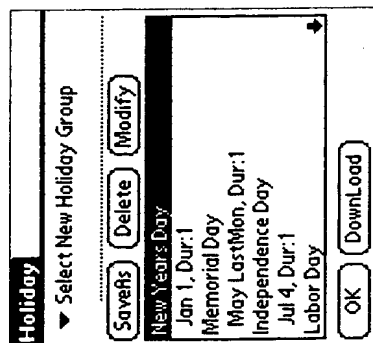


Figure 14O

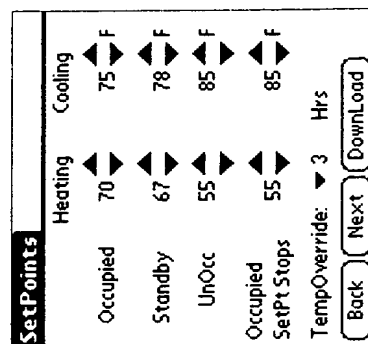


Figure 14P

14/33

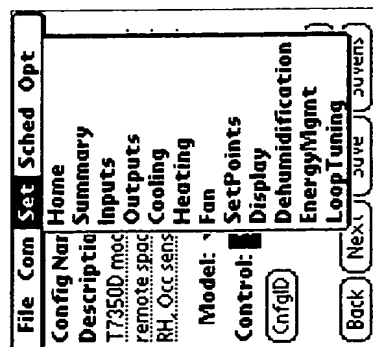


Figure 14Q

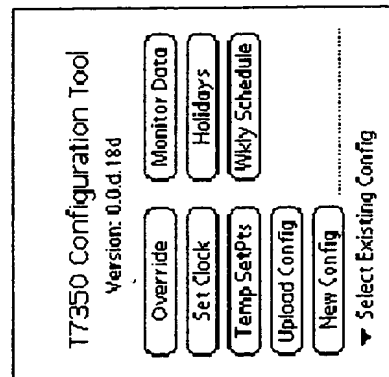


Figure 14R

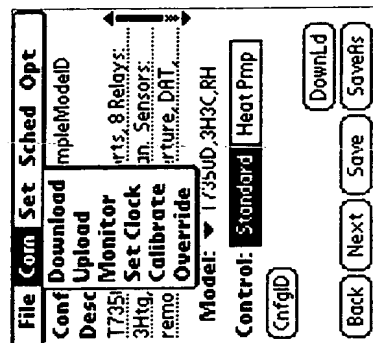


Figure 14S

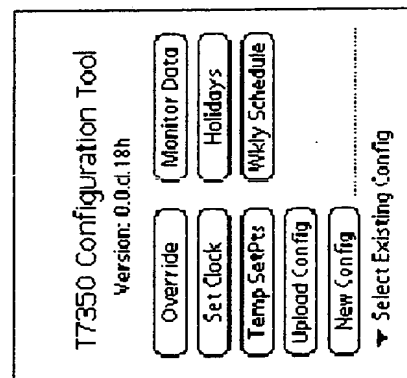


Figure 14T

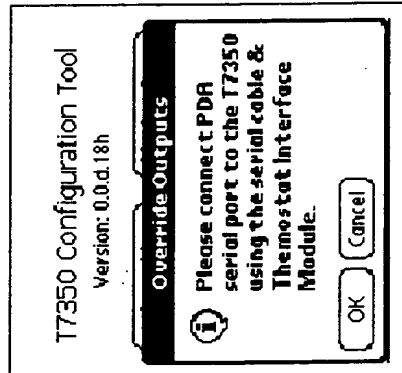


Figure 14U

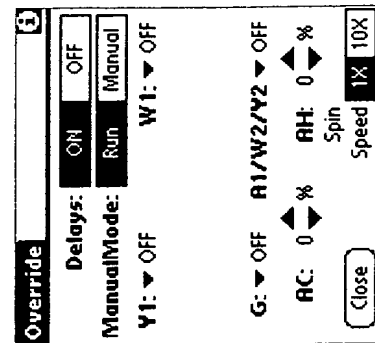


Figure 14V

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**Override** ⓘ

**Delays:** ON OFF

**ManualMode:** Run Manual

Y1: ▼ OFF W1: ▼ OFF

Y2: ▼ OFF W2: ▼ OFF

Y3: ▼ OFF W3/Y4: ▼ OFF

G: ▼ OFF aux: ▼ OFF

Close

*Figure 14W*

**Override** ⓘ

**Delays:** ON OFF

**ManualMode:** Run Manual

Y1: ▼ OFF W1: ▼ OFF

Y2: ▼ OFF W2: ▼ OFF

Y3: ▼ OFF W3/Y4: ▼ OFF

G: ▼ OFF aux: ▼ OFF

**ManualOverride**

*Figure 14X*

**Override** ⓘ

**Delays:** ON OFF

**ManualMode:** Run Manual

**Exiting Manual Mode**

⚠ Manual settings will timeout in 60 seconds. Make changes to outputs and tap MANUAL button to continue.

OK

*Figure 14Y*

**Override** ⓘ

**Delays:** ON OFF

**ManualMode:** Run Manual

Y1: ▼ OFF W1: ▼ OFF

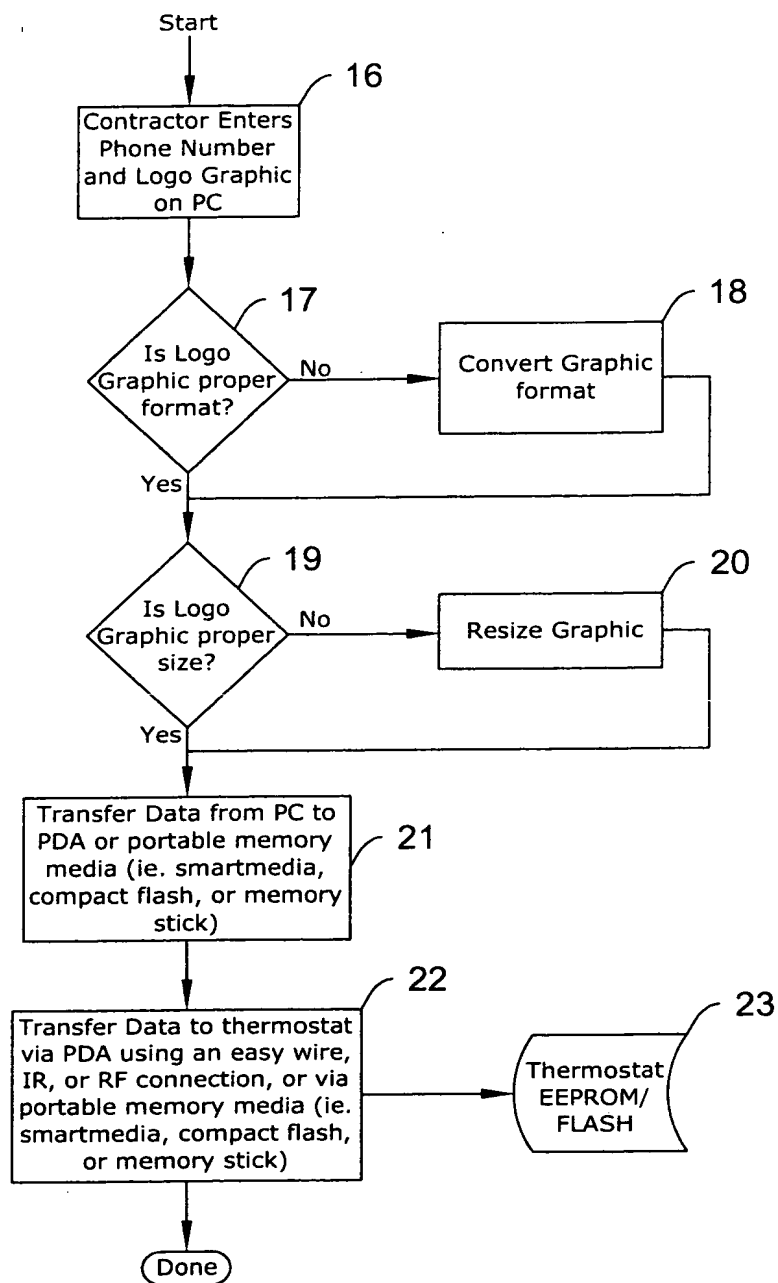
**Output Delays Disabled!**

⚠ The relay output min on/off time & the sequential start delays are disabled.

Continue Enable Delays

*Figure 14Z*

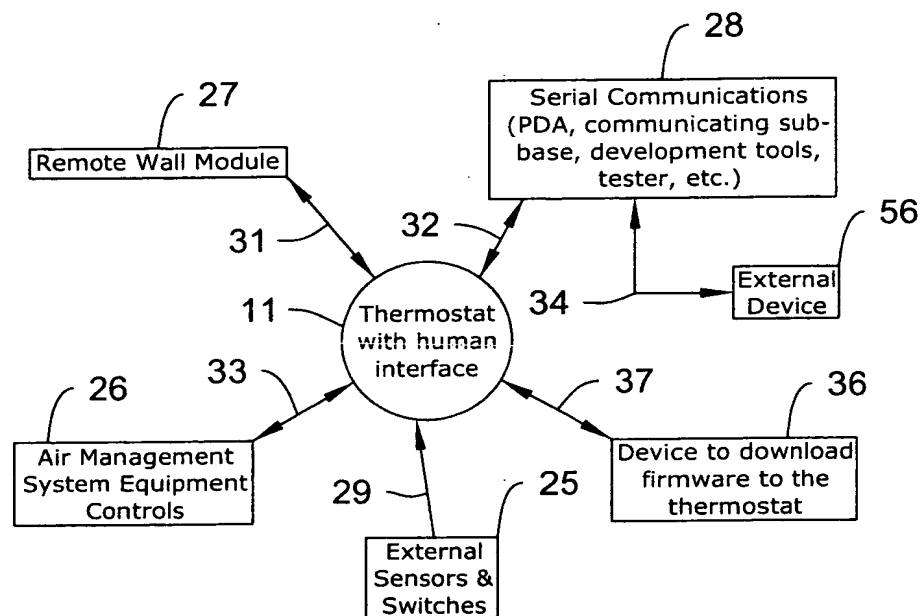
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*Figure 15*



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*Figure 16*

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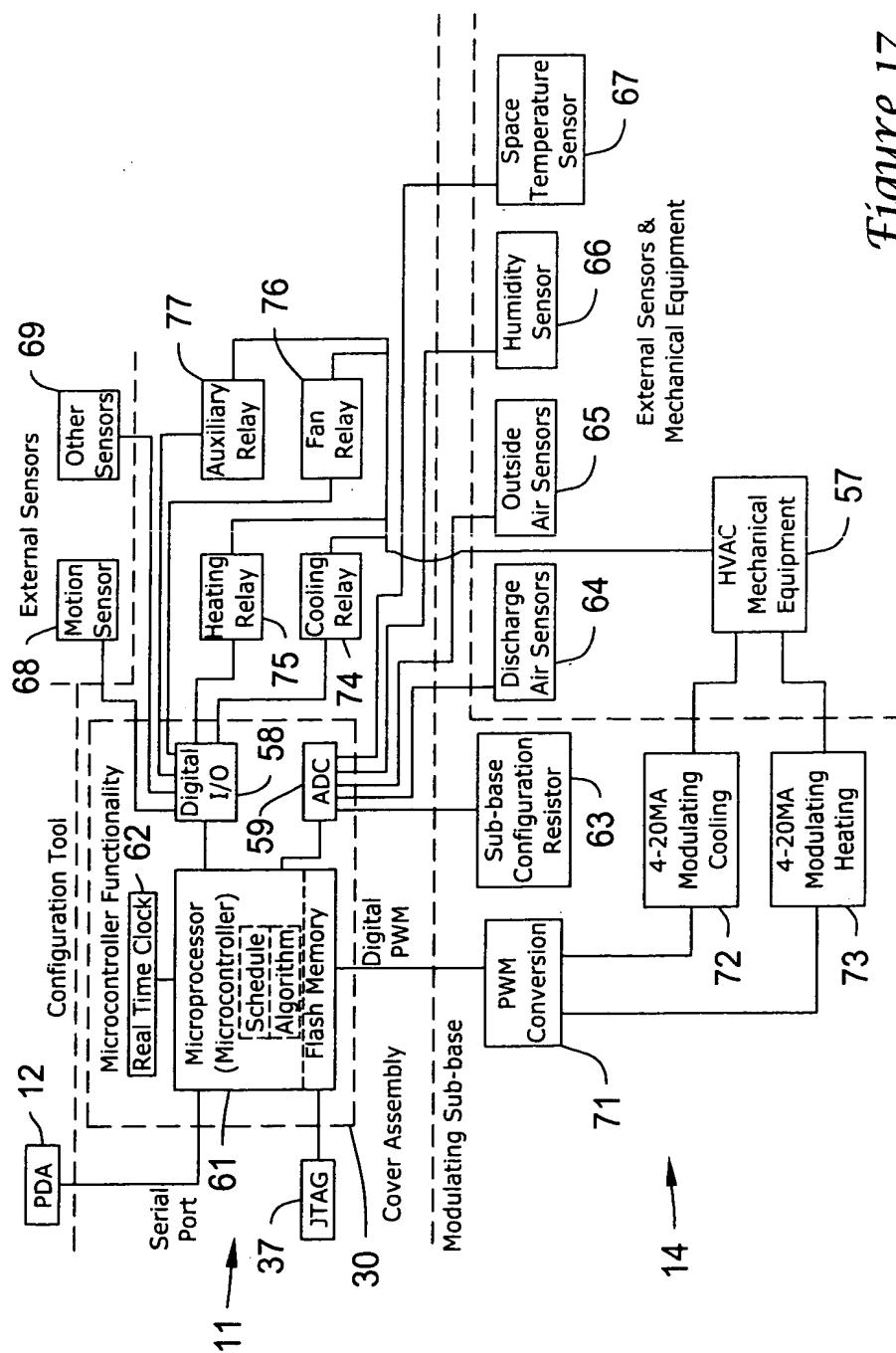


Figure 17

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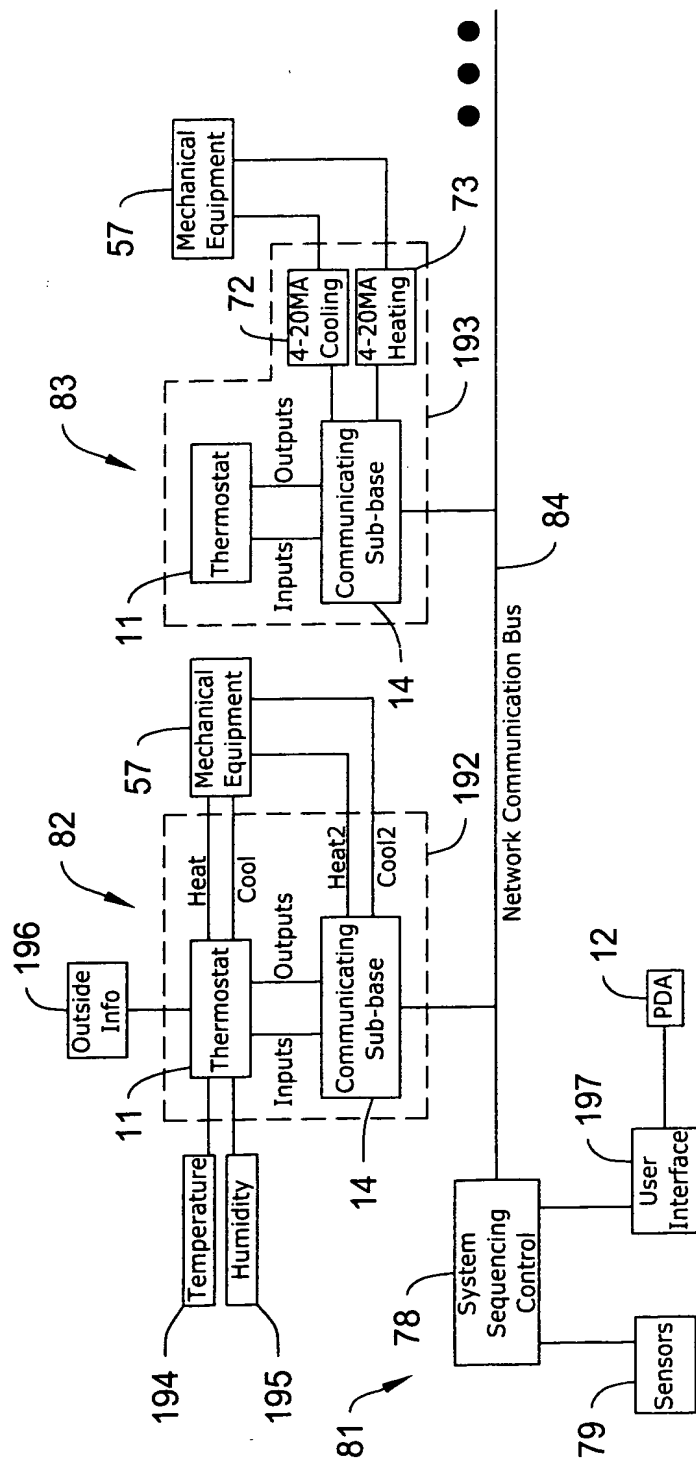


Figure 18

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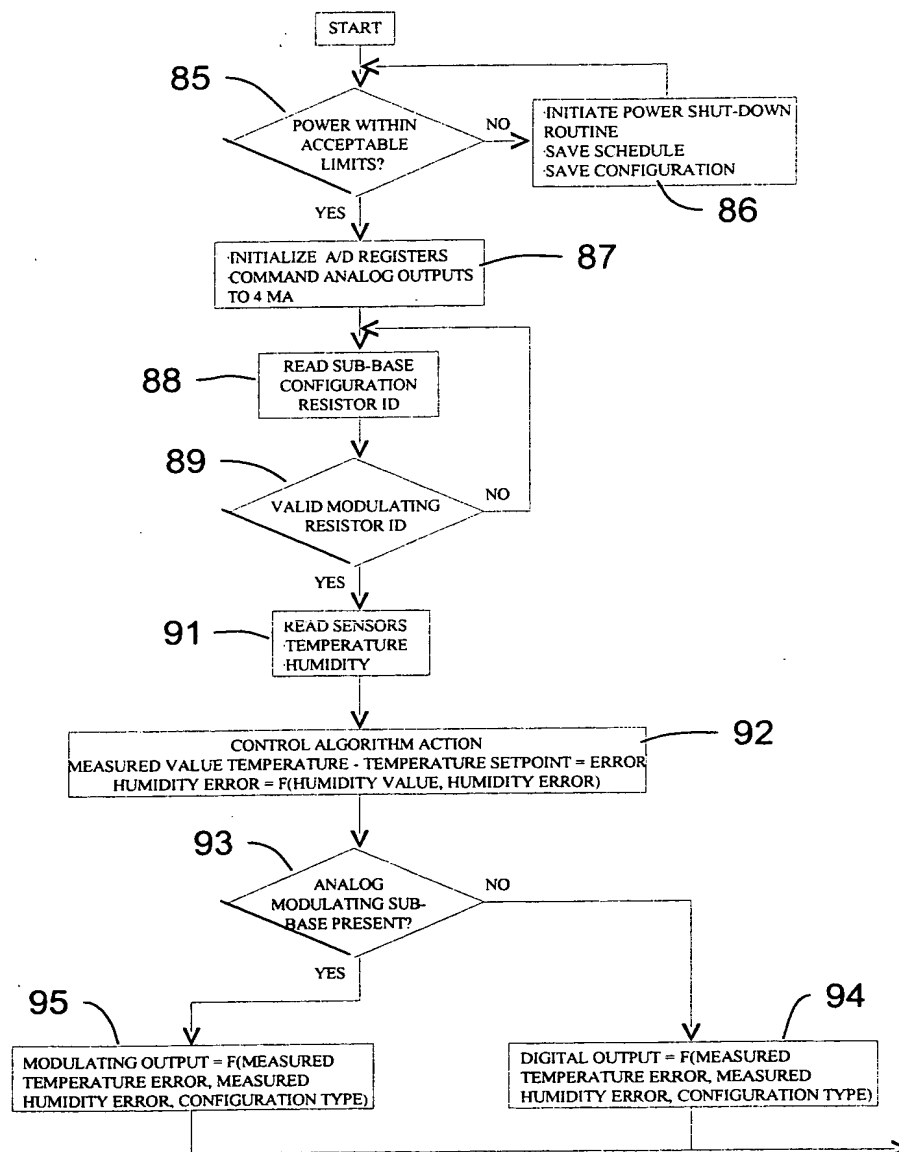


Figure 19

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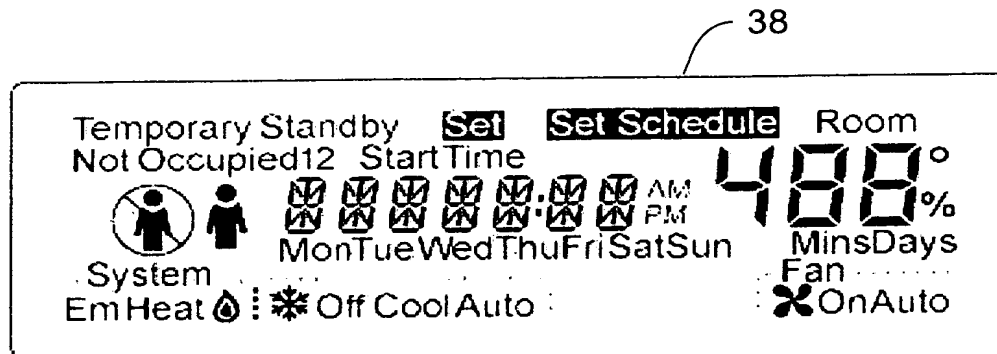


Figure 20A

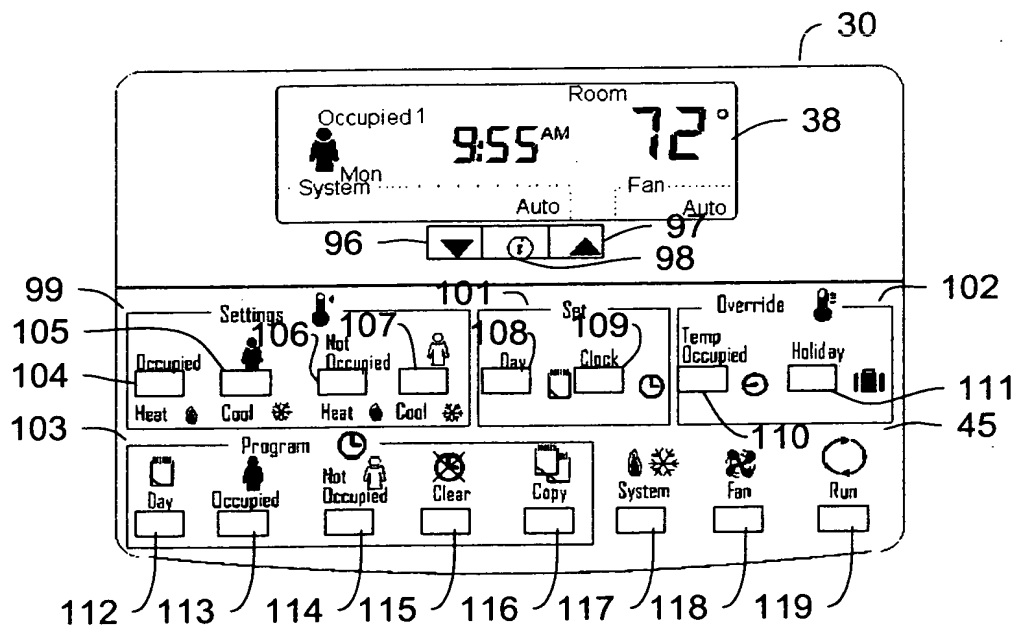


Figure 20B

The schematic diagram illustrates a building energy management system (40) and its control architecture. The hydronic loop includes a return air duct (RA) and an outdoor air duct (OA) connected to a supply air duct (DA). The loop contains a pump (46), a control valve (43), and a heat pump C/O valve (53). Various sensors are placed throughout the system: an outdoor air temperature sensor (OAT) (48), a return air temperature sensor (51), a supply air temperature sensor (52), a differential pressure sensor (49), a remote sensor (55), and an occupancy sensor (54). The control system consists of a Control Panel (50) that receives inputs from the OAT sensor (48) and the remote sensor (55), and outputs control signals to the pump (46), the control valve (43), and the heat pump C/O valve (53). A Thermostat (11) is also connected to the Control Panel (50) and the remote sensor (55). The Thermostat (11) is connected to an Interface (28), which is connected to an External Device (56, 12). The External Device (56, 12) is also connected to the Sub-base (14), which is connected to the remote sensor (55). The Sub-base (14) is also connected to the occupancy sensor (54).

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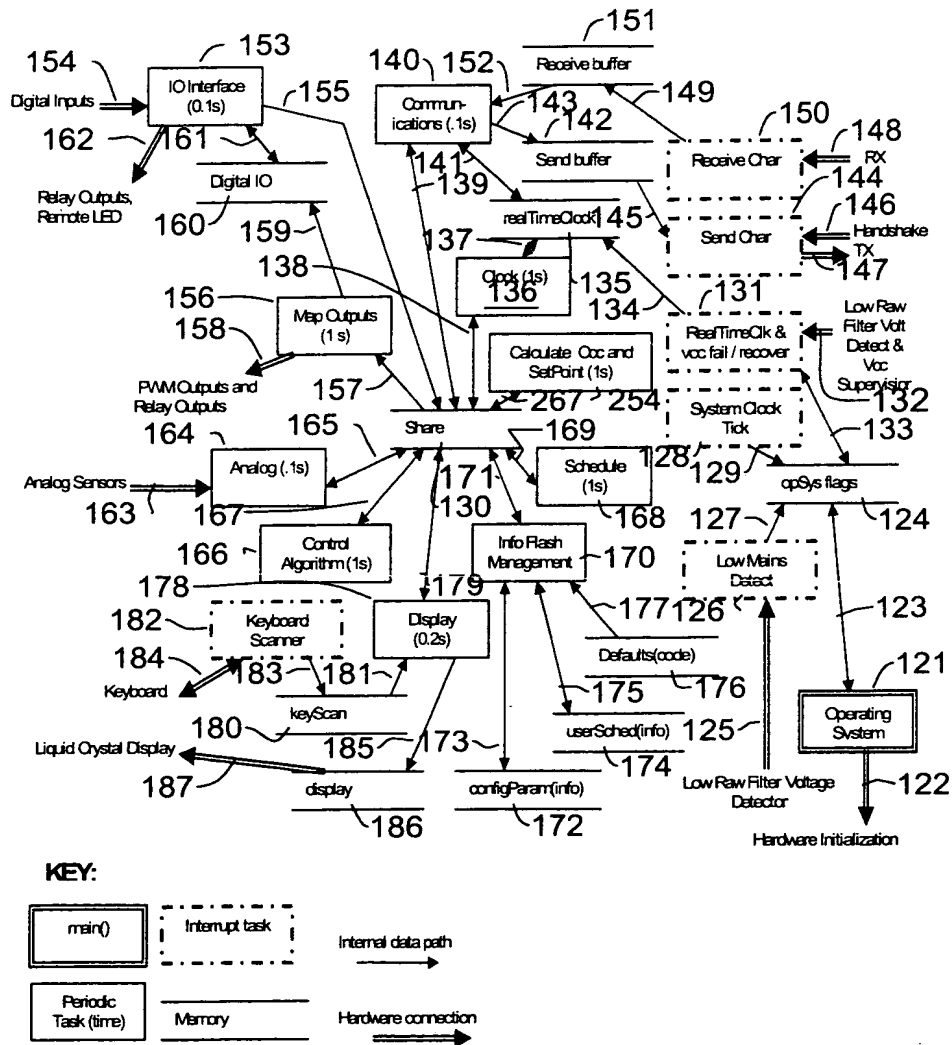


Figure 22

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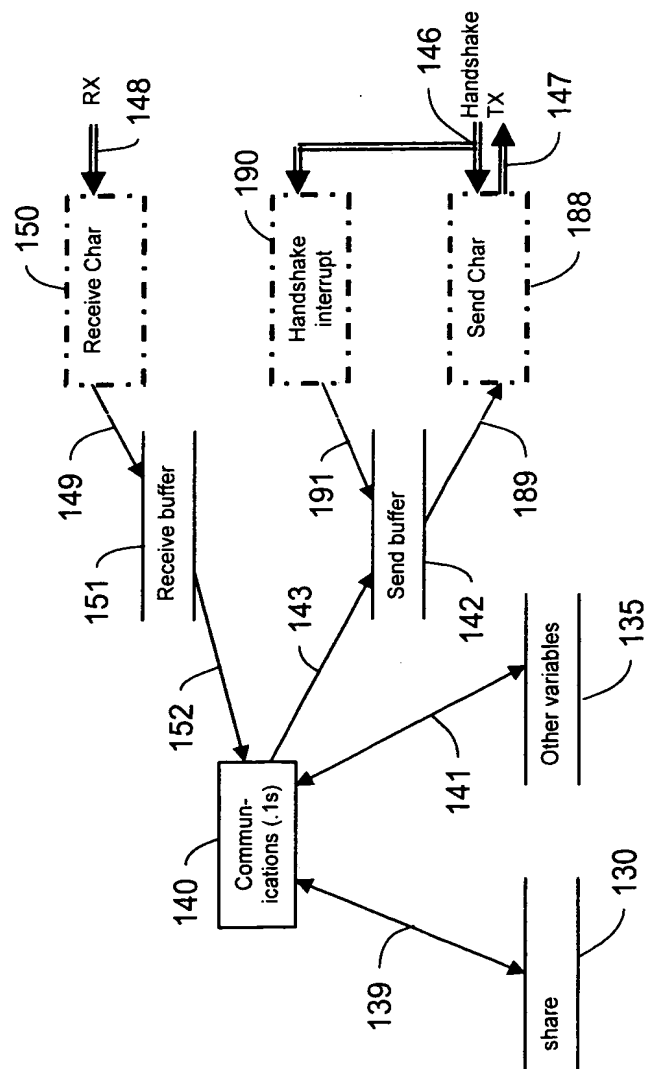


Figure 23



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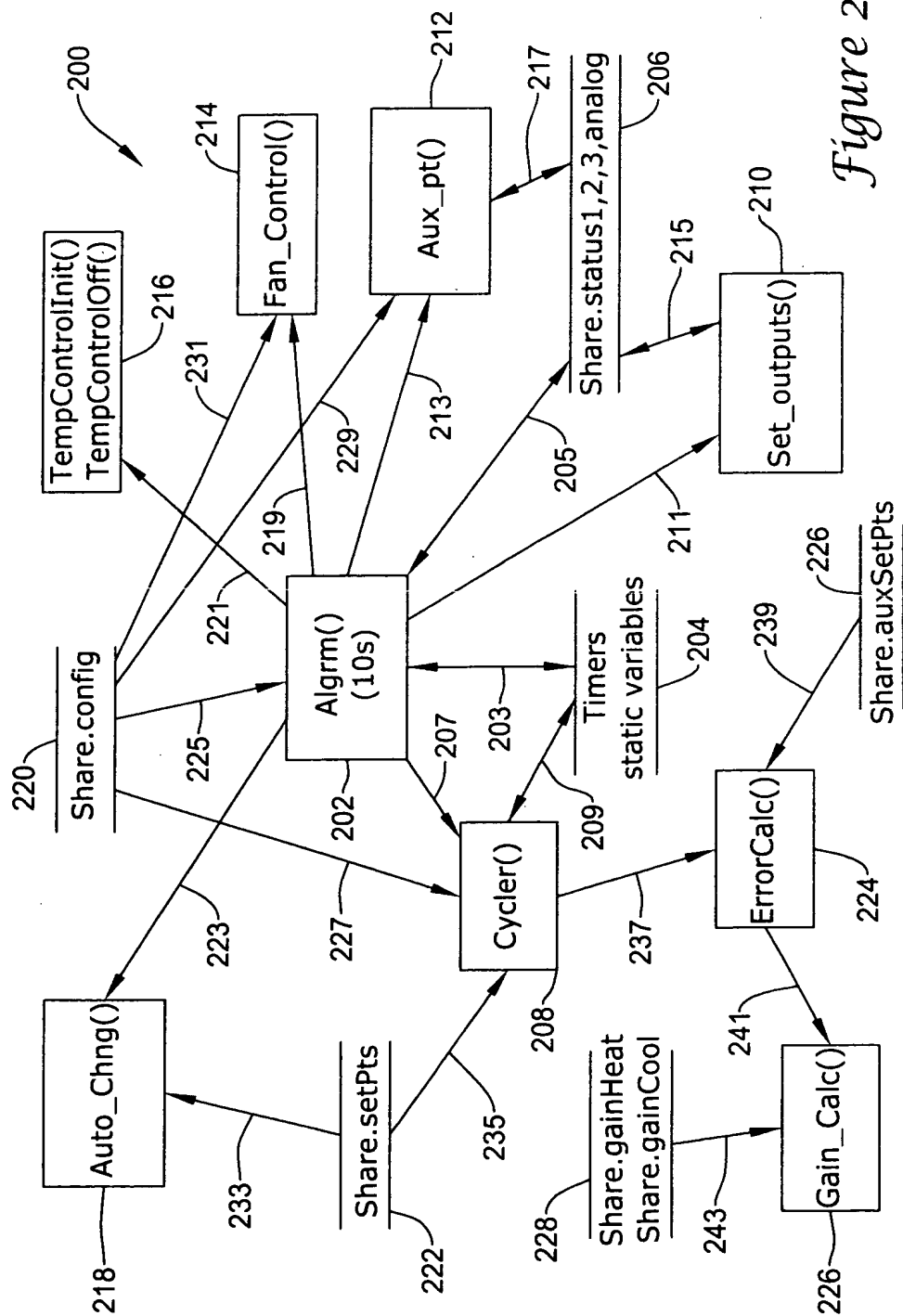


Figure 24

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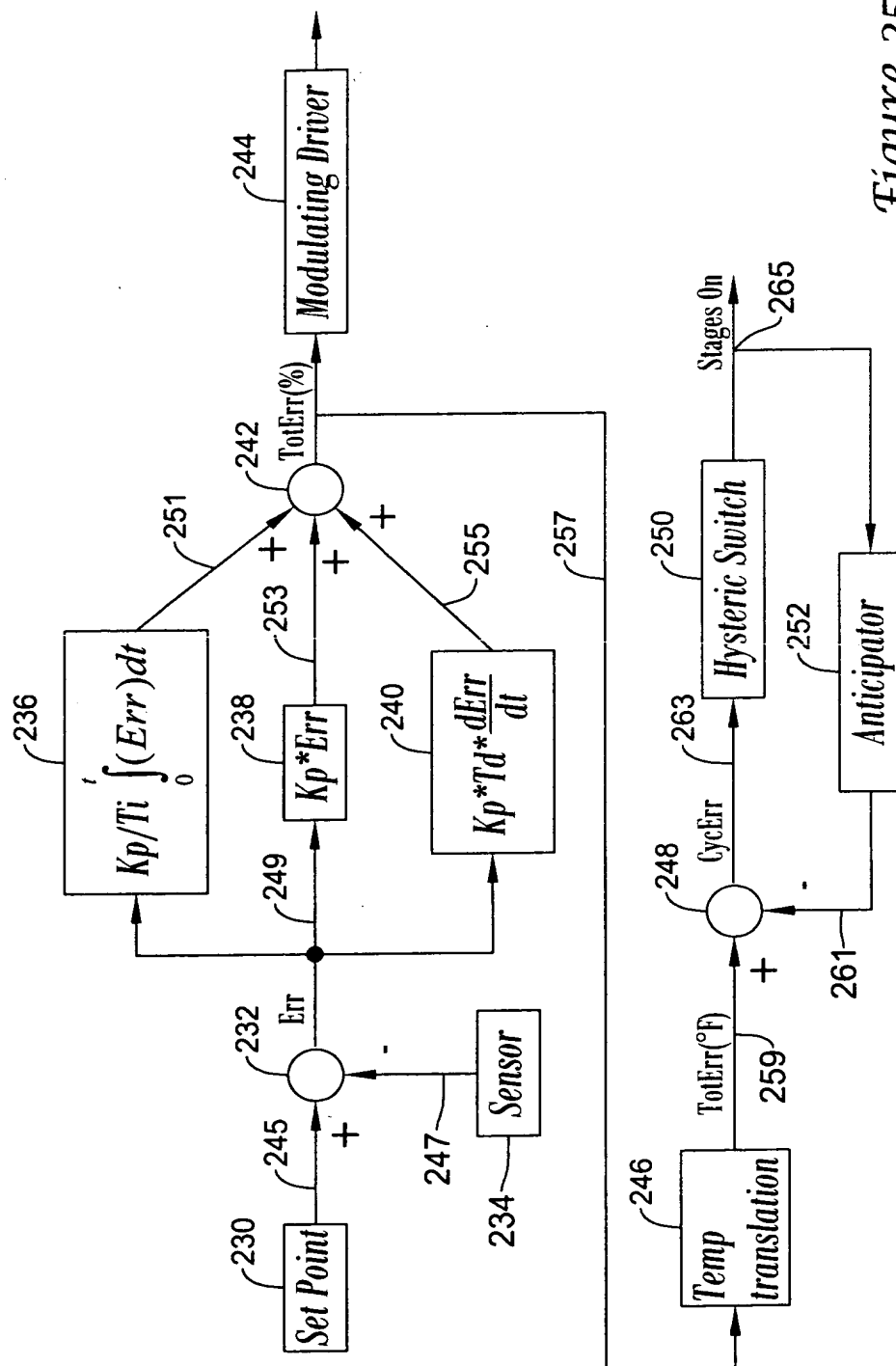


Figure 25A

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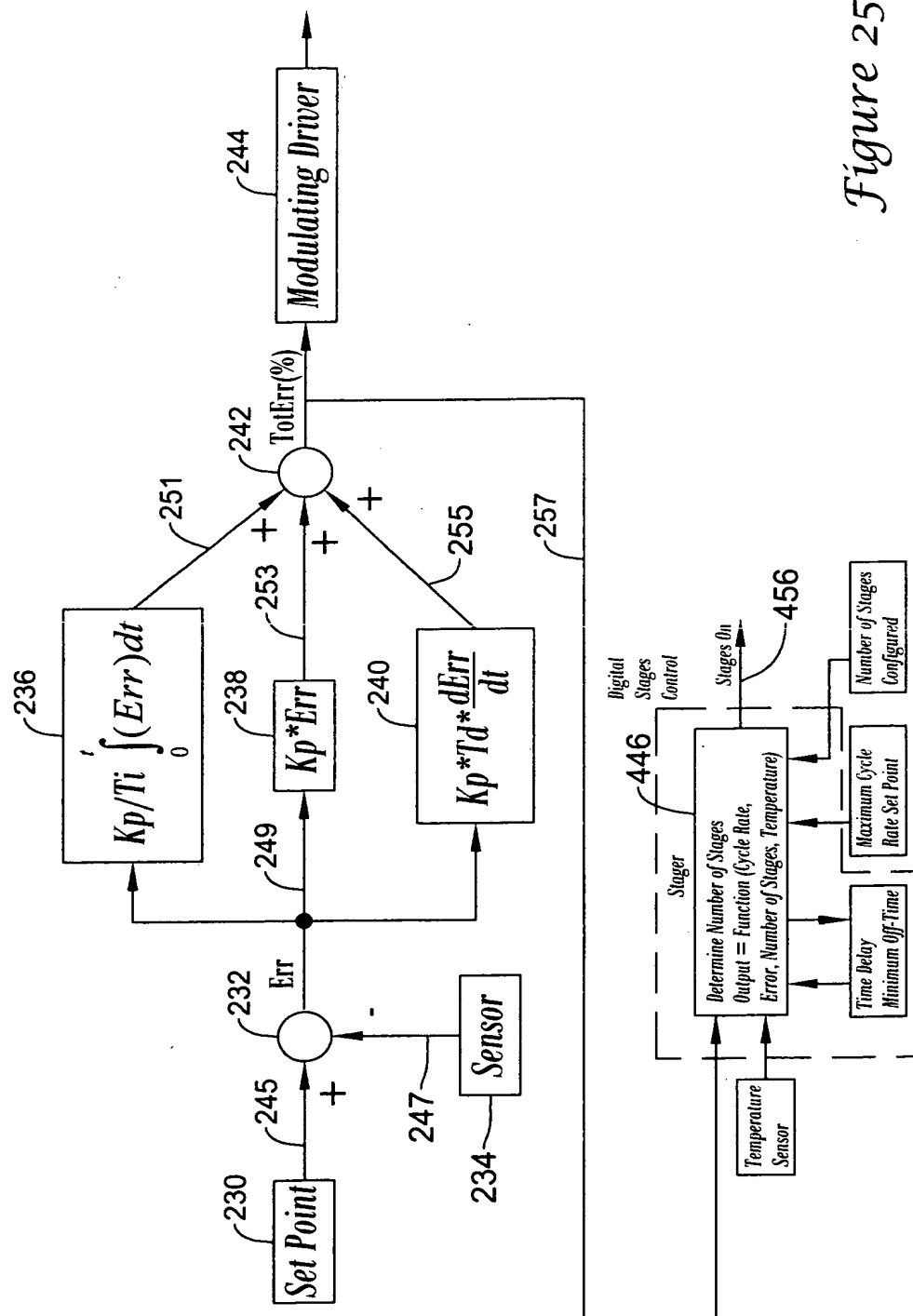


Figure 25B

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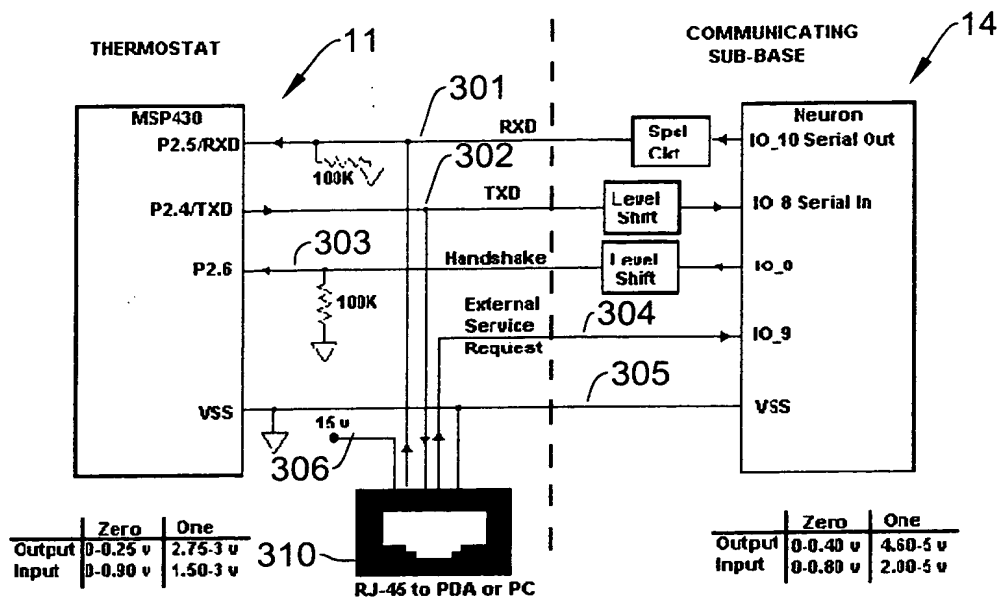


Figure 26

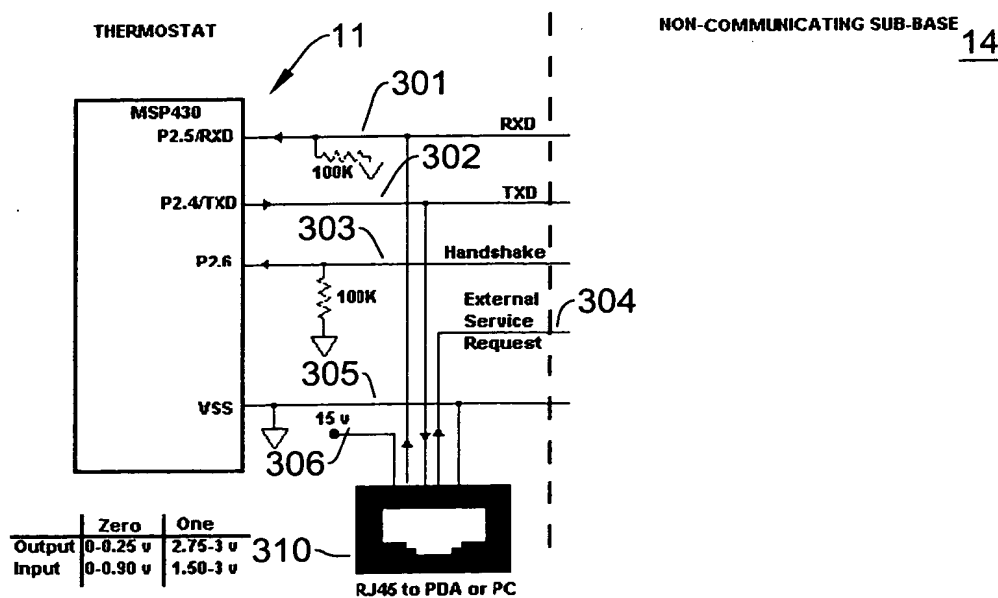


Figure 27

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**T7350 Configuration Tool**  
 Version: diag1

Override Monitor Data  
 Set Clock Commission  
 Temp SetPts Holidays  
 Upload Config Weekly Schedule  
 New Config

▼ Select Existing Config

Figure 28A

**T7350 Configuration Tool**  
 Version: diag1

**T7350 Online Diagnostics**

Please connect PDA serial port to the T7350 using the serial cable & Thermostat Interface Module.

OK Cancel

Figure 28B

**Commission Summary**

Sensors: Failed  
 Fan/Flux: UnTested  
 Cooling: OK  
 Heating: OK

**Error Summary:**  
 DISCHARGE AIR SENSOR FAILURE:  
 Temperature sensor is configured  
 and is out of range or disconnected.

REMOTE OUTDOOR AIR SENSOR

Back Next Close

Figure 28C

**Sensors**

Valid

Room Temp: 73 F  
 Remote SetPt: -5  
 Remote Bypass: OFF  
 Room Rel Humidity: 55 %  
 Occupancy Sensor: OFF  
 Discharge Air Temp: Failed  
 Outdoor Air Temp: 60 F

Back Next Update Test

Figure 29A

**Sensors**

Valid

Room Temp: 73 F  
 Remote SetPt: -5  
 Remote Bypass: OFF

**Testing Room Temp**

Room Temp: 73 F  
 Please confirm Room Temperature.

Pass Fail

Figure 29B

**Sensors**

Valid

Room Temp: 73 F  
 Remote SetPt: -5

**Testing Remote SetPt**

Remote SetPt: -1  
 Please rotate remote setpoint to the full - position (CCW) and tap OK.

OK

Figure 29C

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**Cooling Equipment**

Manual Mode: OFF  
Fan Status: OFF  
Clg Stage 1 - Y1: OFF  
Clg Stage 2 - Y2: OFF  
Clg Stage 3 - Y3: OFF

Valid ☐

Back Next Update Test

Figure 31A

**Cooling Equipment**

Manual Mode: OFF  
Fan Status: OFF  
Clg Stage 1 - Y1: OFF

Valid ☐

**Testing Cooling Operation**

? Fan Status: OFF

Please confirm it is safe to start the Fan.

Yes No

Figure 31B

**Sensors**

Room Temp: 73 F  
Remote SetPt: -5  
Remote Bypass: OFF  
Room Rel Humidity: 55 %  
Occupancy Sensor: OFF  
Discharge Air Temp: Failed  
Outdoor Air Temp: 60 F

Valid ☒

Back Next Update Test

Figure 29F

**Fan/Auxiliary Equipment**

Manual Mode: OFF  
Fan - G: OFF  
Time Off Day - A1: OFF

Valid ☐

Back Next Update Test

Figure 30

**Sensors**

Room Temp: 73 F ☒

**Testing Remote SetPt**

? Full - setting validated.  
Remote SetPt: -5  
Please rotate remote setpoint to the full + position (CW) and tap OK.

OK

Figure 29D

**Sensors**

Room Temp: 73 F ☒

Remote SetPt: -5 ☒

**Testing Remote SetPt**

i Full + setting validated.  
Remote SetPt: +5  
Setpoint test sequence completed.

OK

Figure 29E

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**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Clg Stage1 - Y1 : OFF  
Clg Stage2 - Y2 : OFF  
Valid ☐

**Testing Cooling Stages**

Validated Stage 1  
Cooling Operation  
Progress: |||||-----  
Cancel

Figure 31G

**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Clg Stage1 - Y1 : OFF  
Clg Stage2 - Y2 : OFF  
Clg Stage3 - Y3 : OFF  
Valid ☒ ☒ ☒

Back Next Update Test

Figure 31H

**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Clg Stage1 - Y1 : OFF  
Clg Stage2 - Y2 : OFF  
Valid ☐

**Testing Cooling Stages**

# of Stages: 1  
DischargeAirT: 78F  
CoilDeltaT: 0F  
Progress: ||-----  
Cancel

Figure 31E

**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Clg Stage1 - Y1 : OFF  
Clg Stage2 - Y2 : OFF  
Valid ☐

**Testing Cooling Stages**

# of Stages: 1  
DischargeAirT: 73F  
CoilDeltaT: 5F  
Progress: ||||-----  
Cancel

Figure 31F

**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Clg Stage1 - Y1 : OFF  
Valid ☐

**Testing Cooling Operation**

? Fan Status: ON  
Please confirm Fan operation.  
Pass Fail

Figure 31C

**Cooling Equipment**

ManualMode: OFF  
Fan Status: OFF  
Valid ☐

**Testing Cooling Stages**

? Fan Status: ON  
# of Stages: 0  
Please confirm it is safe to start Cooling Stages.  
Yes No

Figure 31D

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Heating Equipment

Manual Mode: OFF  
Fan Status: OFF  
Htg Stage 1 - W1: OFF ☒

Valid

Back Next Update Test

Figure 32E

Heating Equipment

Manual Mode: OFF  
Fan Status: OFF  
Htg Stage 1: OFF

Testing Heating Stages

? Please confirm it is safe to activate Heating Stage contact.

Yes No

Figure 32C

Heating Equipment

Manual Mode: OFF  
Fan Status: OFF  
Htg Stage 1: ON

Testing Heating Stages

? Please confirm Heating Stage 1 operation. For example, room baseboard heat is activated.

Pass Fail

Figure 32D

Heating Equipment

Manual Mode: OFF  
Fan Status: OFF  
Htg Stage 1 - W1: OFF ☐

Valid

Back Next Update Test

Figure 32A

Heating Equipment

Manual Mode: OFF  
Fan Status: OFF  
Fan Status: OFF

Testing Heating Operation

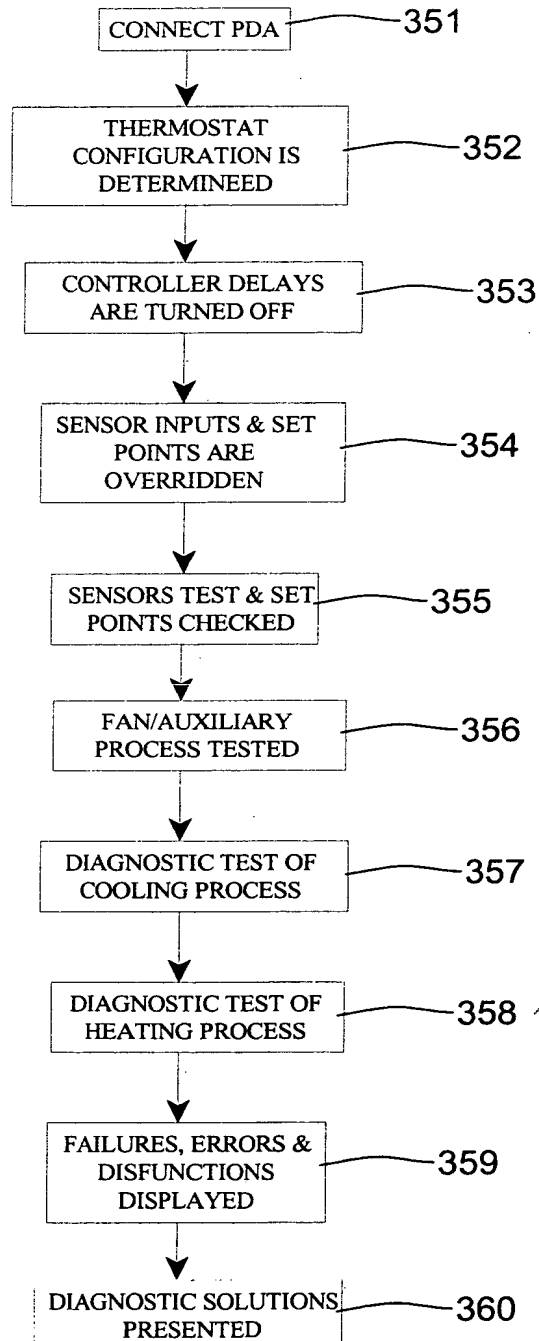
? Please confirm Fan air flow is required for stage 1 heating.

Yes No

Figure 32B



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*Figure 33*